

# Tao Chen

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| CONTACT INFORMATION     | Department of Economics<br>University of Waterloo<br>Hagey Hall of Humanities<br>Waterloo, ON, Canada N2L 3G1   | Phone: (519) 888-4567 ext. 32558<br>Fax: (519) 725-0530<br>E-mail: <a href="mailto:t66chen@uwaterloo.ca">t66chen@uwaterloo.ca</a><br><a href="https://uwaterloo.ca/economics/people-profiles/tao-chen">https://uwaterloo.ca/economics/people-profiles/tao-chen</a> |
| RESEARCH INTERESTS      | Econometric Theory, Applied Econometrics, Functional Data Analysis, Labour Economics  |  |
| EDUCATION               | University of Connecticut, Storrs, CT, USA  |  |
|                         | Ph.D., Economics (with M.A. degree)   | 2003.8 - 2011.6  |
|                         | Ph.D., Mathematics (A.B.D. with M.S. degree)  | 2005.8 - present   |
|                         | Shanghai International Studies University, Shanghai, China  |  |
|                         | B.A., Finance   | 1997.9 - 2001.7  |
| PROFESSIONAL EXPERIENCE | Academic Experience   |  |
|                         | Assistant Professor of Economics, University of Waterloo  | 2011.7 - present   |
|                         | Chu Tian Scholar, Hubei, China  | 2014.9 - 2017.8  |
|                         | Senior Research Fellow of Labor and Worklife Program, Harvard University  | 2015.9 - 2017.8  |
|                         | Others  |  |
|                         | Founding Director of Big Data Research Lab, University of Waterloo  | 2014.5 - present   |
|                         | KPMG, Shanghai  | 2001.7 - 2002.8  |
| PUBLICATIONS            | Semiparametric efficiency for censored linear regression models with heteroskedastic errors, <i>Econometric Theory</i> , forthcoming.   |  |
|                         | A simple consistent test of conditional symmetry in symmetrically trimmed regression models, <i>Journal of Econometrics</i> , forthcoming (with G. Tripathi).   |  |
|                         | A Functional Data Approach to Model Score Difference Process in Professional Basketball Games, <i>Journal of Applied Statistics</i> , forthcoming (with Q. Fan).  |  |
|                         | Testing conditional mean independence under symmetry, <i>Journal of Business &amp; Economic Statistics</i> , forthcoming (with J. Yuan, Y. Zhou and P. Zhu).  |  |
|                         | Model-based versus data-driven approach for road safety analysis: Do more data help? <i>Transportation Research Record: Journal of the Transportation Research Board</i> , No. 2061, (2016), (with L. Thakali and L. Fu). |  |
|                         | Models specification tests and the estimation of treatment effects: an application with random and nonrandom administrative records, <i>Journal of Economic and Social Measurement</i> , 41 (2016), 1-16 (with K. Couch). |  |
|                         | Nonparametric instrumental variable estimation in practice, <i>Journal of Econometric Methods</i> , 5 (2016), 153-177 (with P. Shaw and M. Cohen).  |  |
|                         | Changing tastes: Estimating changing attribute prices in hedonic and repeated sales price indices, <i>Journal of Real Estate Finance and Economics</i> , 52 (2016), 141-175 (with J. Harding).                            |  |

An approximation of logarithmic functions in the regression setting, *Statistical Methodology*, 23 (2015), 50-58 (with K. Couch).

Intragenerational mobility and the ratio of permanent to total inequality, *Applied Economics*, 46 (2014), 4399-4408 (with G. Bayaz and K. Couch).

Semiparametric efficiency bound for partially linear single-index regression models, *Journal of Multivariate Analysis*, 130 (2014), 376-386 (with T. Parker).

Permanent and transitory inequality and intra-generational mobility, *Economics Letters*, 120 (2013), 200-202 (with K. Couch).

Testing conditional symmetry without smoothing, *Journal of Nonparametric Statistics*, 25 (2013), 273-313 (with G. Tripathi).

Vibration modes of 3n-gaskets and other fractals, *Journal of Physics A: Mathematical and Theoretical*, 41 (2008) 015101 (21pp) (with N. Bajorin, A. Dagan, C. Emmons, M. Hussein, M. Khalil, P. Mody, B. Steinhurst and A. Teplyaev).

Vibration Spectra of Finitely Ramified, Symmetric Fractals. *Fractals*, 16 (2008), 243-258 (with N. Bajorin, A. Dagan, C. Emmons, M. Hussein, M. Khalil, P. Mody, B. Steinhurst and A. Teplyaev).

#### WORKING PAPERS

Differences across versions of Penn World Table: A functional data analysis approach (With J. DeJuan and R. Tian, under review)

Equity premium puzzle (with J. Xu, under review).

Single Game Career High VS. Highest Season Average of NBA Players (With Y. Li, under review)

Selecting the optimal sample size in program evaluation studies: A sequential sampling approach.

A cognitive dissonance interpretation of the context effect in economic experiments – evidence from a laboratory bribery game (with S. Wang).

Functional regression: An application to housing valuation (with J. Harding and R. Tian).

Asymptotic independence property in nonparametric estimation - A good large sample approximation or just a wishful thinking? (with J. Zhang and Y. Zhou).

Functional dynamic factor models (with J. Xu and R. Tian).

A structural estimation of the effect of police on crime (with P. Curry and A. Sen).

Assessing the inter-generation mobility - A functional data regression approach (with P. Chausse and K. Couch).

Estimating and testing censored regression models with endogenous regressors under conditional symmetry (with G. Tripathi).

A martingale transformation approach to specification test under weak IV (with G. Tripathi).

An option value model of mortgage default (with S. Ross and Y. Wang).

Culture and home ownership - evidence from immigrants in Canada (with Q. Du and Y. He).

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| TEACHING<br>EXPERIENCE | <p>Courses taught at the University of Waterloo <span style="float: right;">2011.7 - Present</span></p> <p style="padding-left: 40px;">ECON 721: First year Ph.D. Econometrics<br/> ECON 422: Nonparametric estimation for advanced undergraduate<br/> ECON 321: Introduction to econometrics<br/> ECON 311: Mathematics for economists II</p> <p>Courses taught at the University of Connecticut <span style="float: right;">2005.8 - 2009.5</span></p> <p style="padding-left: 40px;">As an independent instructor I have taught Empirical Methods in Economics, Principles of Microeconomics, Principles of Macroeconomics, Problem Solving, Calculus for Business and Economics and Calculus Sequence I-III.</p> |
| GRANTS                 | <p>Brilliant Strategy Investment Consulting, China (PI, 2014 – 2017, CAD 82,194).</p> <p>Wuhan Research Institute, China (PI, 2014 – 2015, CAD 10,000).</p> <p>HuangHe Talents - City of Wuhan, China (Co-PI, 2015 – 2017, RMB 1,500,000).</p> <p>Center for Green Buildings and Cities - Harvard University, USA (Co-PI, 2016 – 2017, USD 100,000).</p> <p>SSHRC - Insight Development, Canada (PI, 2016 – 2018, CAD 31,422).</p> <p>International Research Partnership - University of Waterloo, Canada (PI, 2016 – 2018, CAD 20,000).</p> <p>HSS Endowment Fund - University of Waterloo, Canada (PI, 2016, CAD 5,500).</p>   |
| PREPARED               | <p>January 6, 2017</p>   |